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BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

FOREST INSECT INVESTIGATIONS

REPORT OF FOREST INSECT CONDITIONS IN THE SOUTHERN NATIONAL FORESTS OF THE CALIFORNIA DISTRICT

October - November, 1938

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by
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Berkeley, California
November 9, 1938

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REPORT OF FOREST INSECT CONDITIONS IN THE SOUTHERN NATIONAL FORESTS OF THE CALIFORNIA DISTRICT.
October - November, 1938

An examination of the forested areas of the four southern National Forests of the California district was made during the period October 26 to November 6 by J. E. Patterson and S. T. Carlson of the Bureau of Entomology and Plant Quarantine.

The general purpose of this survey was to ascertain the infestation trends on areas previously studied; but more specifically to examine areas where control work had been proposed by the Supervisors and special funds had been requested for supervision of this work.

It was found that infestation conditions were generally favorable throughout the pine forests with a pronounced trend toward decreased annual losses. However, this decrease has not been uniform on all areas and some show only a slight decrease, with present losses exceeding the minimum considered safe for those recreational forests. These areas were given special attention in order to determine the necessity for immediate control work.

The areas examined together with recommended action are discussed in the following sections of this report.

SUMMARY OF RECOMMENDED CONTROL PROJECTS.
Southern California National Forests.

Forest	Area	Number of trees to treat	Estimated cost - spotting and control supervision.
Los Padres	Figueroa	40	$100.00
San Bernardino	Arrowhead	150	Control work will be done by Arrowhead Lake Corp.
" "	Crest	20	30.00
" "	Snow Valley	100	120.00
" "	Big Bear	300	320.00
" "	Fawnskin and Big Pines	150	175.00
" "	Santa Anna	150	195.00
" "	Idyllwild	30	60.00
Cleveland	Lagunas	300	435.00
"	Lost Valley	70	165.00
"	Mendenhall	30	Control work to be done by County road crew.
Total		1,160	$1,600.00
Unit		1	$1.38

LOS PADRES NATIONAL FOREST

Figueroa Mountain areas: The general infestation conditions on this area are favorable, with the current losses slightly lower than those of previous years. However, a high normal infestation persists on certain sections which should be controlled. The overwintering infestation on the separate units is estimated to be: Figueroa Mountain, 10 trees; Zaca Peak, 15 trees; East Pinery, 15 trees. This project as set up will require about 10 man months of CCC labor to complete it. A special allotment of $100.00 to carry a spotter foreman to spot infested trees and supervise the control work is required. This project is recommended.

Mt. Pinos area: Infestations during the 1938 season are well below the status of previous years. The reduction in insect caused losses is at least 50% on all areas examined. The year's loss will not exceed an average of 10 trees per section with the infestation greatly scattered throughout the forest. Indications are that a further decline will occur during the ensuing year. No control work in this region is recommended.

Fraser Mountain: The extensive pinon forests of this section are remarkably free of beetle losses and no early infestations are expected to occur. Damage to the terminals on many trees has resulted from attacks by the scale, Matsucoccus sp. Control of this insect is not recommended at the present time, but the infestation should be closely watched to note any increase in activity and spread to uninfested trees.

ANGELES NATIONAL FOREST

Big Pines Recreational Areas.

Big Pines Park: Infestation conditions are very favorable, registering a noticeable drop since 1937. The estimated loss for 1938 will not exceed 5 trees per section and is confined exclusively to Jeffrey pine. Infestations in sugar pine and white fir have practically disappeared.

Swartout Valley: Infestations in these stands is lighter than others have been during the past 5 years. The total loss during 1938 will not exceed 10 trees on the entire timbered area. There are no indications of an early increase.

Control work is not recommended on either of these areas.

SAN BERNARDINO NATIONAL FOREST

Miller Canyon: Current infestation is very low. The estimated loss will average about 5 trees per section. Present conditions point to a continuance of this status. No control work is recommended.

Arrowhead Lake: Current infestations are extremely spotted in the pine stands of this area. The 1938 loss south and west of the lake will average about 5 trees per section. The infestation is even lighter in Valley of the Moon, Cedar Pines Park and at Crestline. No control work is indicated on any of these subareas. Recent losses on the north and east of Arrowhead Lake have been comparatively heavy. These infestations are showing a decided tendency toward grouping, a sign of increasing losses. Control work on a part of this area was carried out by the Arrowhead Lake Company during the past spring and summer. A total of 200 infested trees were treated, although the entire infested area was not covered. The overwintering infestation on these areas is estimated to be 150 trees. The infestation is largely confined to Coulter pine, although some Jeffrey pine are infested. These should be felled and treated prior to April 1, 1939. The Arrowhead Lake Company plans to carry out this control work during the winter months. There is also an infestation involving about 20 trees along the crest between Strawberry Peak and Heaps Peak which is largely on National Forest lands. It is recommended that these trees be removed and treated.

Snow Valley. The infestation in this small area has shown no tendency toward decreased losses and should be treated before further depredations occur. The overwintering infestation is estimated to be 60 infested trees, principally Jeffrey pine. The infestation extends into Little Green Valley in the same intensity, increasing the total for both areas to about 100 trees. It is recommended that both areas be treated during the coming winter period.

Big Bear Lake: Infestations in the Jeffrey pine have been relatively high in this area for the past five years. These infestations have shown no tendency toward decreased losses and are annually taking far too many mature trees on the highly developed sites. The current losses are largely concentrated around the west end of the lake, and in amount are estimated to be about 30 trees per section, or a total of about 300 trees. The Jeffrey pine beetle and the California flathead beetle are responsible for these losses. Control of both these beetles involves falling the infested trees and burning the bark.

The infestations through Fawnskin Valley and Big Pines Flat are less in number of trees attacked, and are estimated to average 20 trees per section, with a total for both areas of 150 trees. Since the loss of even individual trees on these highly developed recreational areas greatly depreciates their value, it is recommended that all infested trees be treated without delay.

Santa Anna Canyon: In general the infestations in this watershed are lower than in the past. There are, however, some local areas where infestations have not followed this general trend and remain in a high endemic state. The infestations in these local centers should be reduced by control measures. Areas on which control work is recommended for the winter period are: Converse Flat, Barton Flats, and Big Meadows. The estimated overwintering infestation on these three areas aggregates about 150 trees. Protection of this timber on these intensively used sites is of great recreational value in preserving natural conditions which constitute their greatest appeal.

Idyllwild District: Current infestations over the greater part of this area are decidedly below former status. This reduction, however, has not been uniform throughout , with the result that high normal losses persist on a few local sites. The estimated infestation in the Keen Camp section amounts to 60 trees on an area of about 2 sections. This area should be treated. Also a cleanup should be made in Kenworthy and around Hemet Reservoir. Scattered infested trees here will approximate a total of 30.

Dying pines in the riparian stands around Lake Hemet have occasioned a good deal of comment regarding the cause of their death. An examination revealed that the cause of death to these shore-line trees was a rise in the lake level during the flood stage of last winter which submerged the root collars. No insects are involved in the death of these trees.

Recommendations

Owing to the high value of trees on the recreational and home site areas of this forest, insect depredations should be kept to the lowest point practicable with present methods. In order to reduce existing infestations and to guard against future losses, control work during the coming winter period is recommended on the following areas:

Arrowhead Lake. Estimated infestation of 150 trees. It is understood that control of this area will be done by the Arrowhead Lake Corporation under the direction of Superintendent B. F. Wallace.

Arrowhead Crest. An infestation involving 20 trees on National Forest lands. Snow Valley and Little Green Valley. An infestation aggregating 100 trees on National Forest lands.

Big Bear Lake. Infestations at the west end of the lake are critical, aggregating about 300 trees, largely on National Forest lands.

Fawnskin and Big Pines. The estimated infestation recommended to be treated on these areas amounts to a total of 150 trees, all on National Forest lands.

Santa Anna Canyon. Control work should be carried out at Converse Flat, Barton Flats and Big Meadows. The total infestation is estimated to be 150 trees.

Idyllwild. Control work is recommended only at Keen Camp, around Hemet Reservoir, and in Kenworthy, involving the treatment of about 90 infested trees.

It is understood that this control work, if approved, will be carried out by CCC or relief labor. Competent supervision will be necessary at all times, and the spotting of infested trees must be done by someone qualified to do this work thoroughly and efficiently. The control work will extend over a period of approximately 6 months, requiring the employment of a spotter-foreman on salary for this length of time. Salary and travel expenses for this man will amount to $900 and an allotment of funds in this amount is recommended.

CLEVELAND NATIONAL FOREST

Timbered areas on this forest were examined during the period October 31 to November 4. Examinations were made in the following areas:

Pine Valley and Corte Madera: Current infestations are practically nil in these stands. No infested trees were found in Pine Valley and only two at Corte Madera. No control work is recommended.

Laguna Mountain Recreational Areas: Current infestations in the Jeffrey and Coulter pine on these intensively used recreational areas are somewhat less than formerly, but are still above normal conditions. The estimated overwintering infestation in terms of number of trees attacked is 300 trees. Control of this infestation is urgently recommended. Previous control work on these areas has been successful in greatly reducing losses and has demonstrated its effectiveness in protecting these stands against high beetle losses.

Palomar Mountain: Insect infestations in this section of the forest are generally at a very low point and do not warrant artificial control measures at present. A recent flareup occurred in the dense pine stands at the upper end of Mendenhall Valley. This local infestation resulted from slash breeding in fresh logs removed from the new observatory road and it covered an area of about 120 acres. During the past winter and spring periods, a total of 120 infested trees, principally Coulter pine, were treated by county road crews under the direction of Gustaf Juhren. The current infestation on this area amounts to about 30 attacked trees. Juhren will recommend that treatment of these trees be carried out under the same setup, and it is hoped that this necessary work can be accomplished during the coming winter. Outside of this local infestation center, no other control work is recommended.

Lost Valley, Palomar District: Insect infestations in this isolated area have been continuous for a period of at least 5 years. These successive infestations have greatly depleted the pine stand and since there is no evidence of early abatement of the losses, early control work is warranted. The area includes about 4 sections of Jeffrey pine timber on which there is an estimated infestation of Ips and Dendroctonus jeffreyi amounting to a total of 70 trees. Since the area is well isolated and can be reached only by trail, cost of control will be relatively high. However, it is recommended that artificial control of the infestation be carried out.

Recommendations.

Critical infestations exist on some of the more intensively used recreational areas of this forest. Insect losses on these areas are far too high to ignore and should be reduced by control measures. Control work during the coming winter period is recommended on the following areas:

Laguna Mountain. Estimated overwintering infestation amounts to a total of 300 trees. This work may be done any time after December 1 and prior to April 15. The infestation is principally Melanophila and Dendroctonus jeffreyi in Jeffrey pine and Dendroctonus brevicomis in Coulter pine. The burning method is considered most effective on this area.

Lost Valley. Estimated overwintering infestation amounts to 70 to 100 trees. Control may be carried out any time during the winter period from December 1 to April. The infestation is principally Ips sp. in Jeffrey pine. The burning method is recommended.

It is understood that the control work on these areas will be done by CCC or relief labor under the supervision of an experienced control man on salary provided by special allotment of funds. The control work will extend over a period of 4 months. Close supervision will be necessary for the full time, requiring an allotment of $600. It is recommended that this amount be made available for this as soon after December 1st as possible.